

P907 in Meson Center

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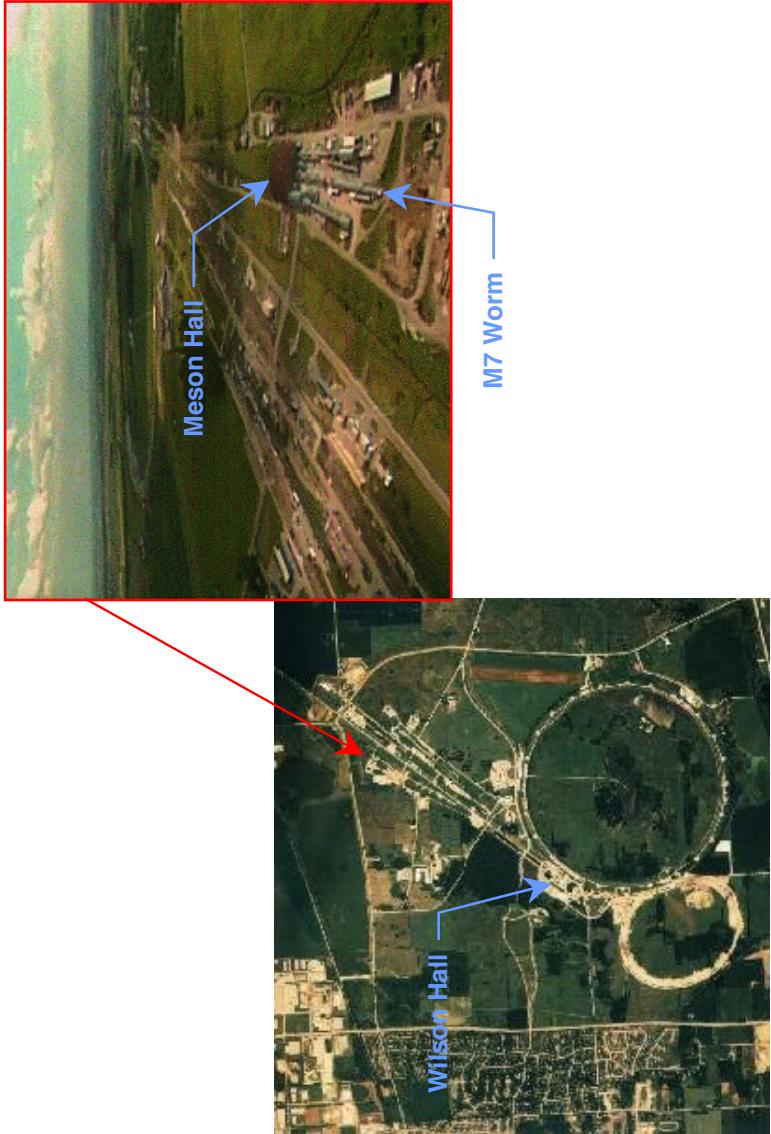
FNAL, 29 September 2000

Requirements & Constraints

- Tagged Secondary Beam p^\pm, π^\pm, K^\pm
 - 50% Interaction Length Secondary Beam Production Target
 - 2 x 16 m Cerenkov counters
- 5 – 120 GeV/c Momentum Range
- Few % Momentum Bite
 - Need Dispersion and Aperture
- Saturate TPC DAQ Rate
 - 60 Hz Existing Frontend Limit
- No Event Overlap
 - 8 μ s Drift Time to Clear Ions from Axis
- Meet Activation Limits
 - Adequate Shielding Around Beam Target and Collimator



Meson Area



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Meson Center (MC)



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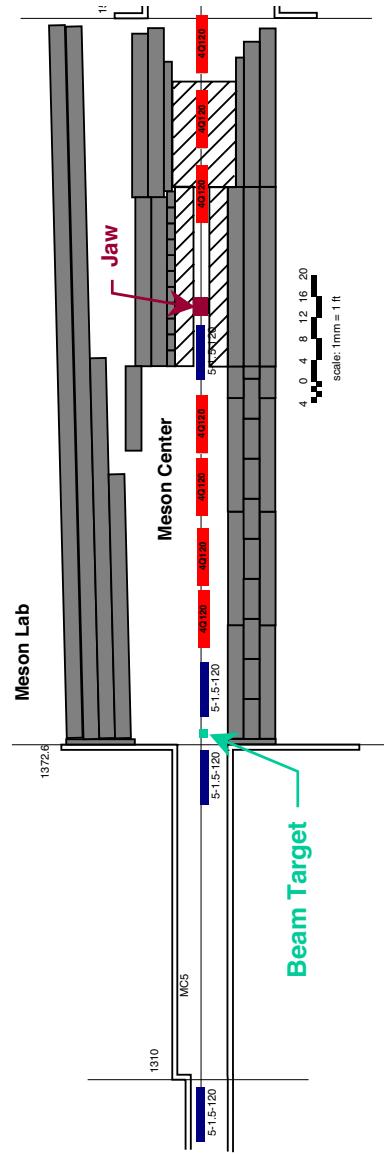
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MC6 Beamline Design



B1 Dipoles 4Q120 Quads

- Horizontal Offset to Beam Target 2
- Return to Axis at Collimator Jaw 2
- Focus Beam Target At Jaw 4
- Focus Jaw at Experiment Target 3



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MP6 Target Pile



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Inside the MC6 Piles



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MC6 Target Pile Tasks

- Open and Remove Magnets from “Pre-Target” and “Target Piles”
- Remove Magnets from MC5
 - Install MC5 B1
 - Install P907 Magnets, Chambers, Jaws
- Close Piles



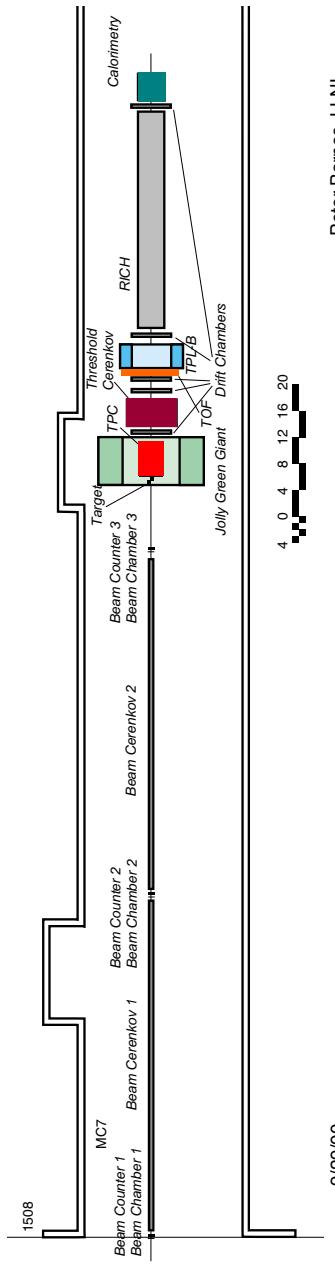
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P907 Experiment Design in MC7 Worm



- Cerenkov Beam Tagging, Tracking Chambers
- TPC in Jolly Green Giant (JGG)
- Threshold Cerenkov
- Time of Flight
- TPL-B (aka E516 M2) Magnet
- RICH
- Neutral Calorimeter



Meson Worm



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Inside the MC Worm



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Jolly Green Giant Pole Tip



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JGG Coils



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MC7 Worm Tasks



- **Upstream Bump**
 - Open MC7 Roof
 - Remove BM109's
 - Close Worm
- **Remove Hyper-CP**
 - 9 PWC, 2 HODO, 2 μ , nCal, steel, blocks
- **Install E907**
 - Through Downstream Bump and MC7 DS
 - Shore Up MB
 - Open Roof
 - Install JGG, TPC
 - Install CKOV, TOF
 - Install TPL-B
 - Install RICH
 - Install nCal

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